SPAWAR Systems Center San Diego

Location of GPS Interferers (LOCO GPSI)

Growing GPS use, particularly for safety-of-life applications (i.e., flight in controlled airspace, harbor navigation, etc.) has placed considerable attention on the risks associated with using a low-signal-power radio navigation system. Detecting GPS interference and an ability to locate the interference source(s) can be a powerful way of dealing with the interference risks associated with GPS. Since 1997, SSC San Diego has been working on a technology development program to detect and locate sources of collateral interference and intentional jamming, and to assess the technical feasibility and utility of this concept on an airborne platform. The project entitled LOCO GPSI (Location of GPS Interferers) used a high-sensitivity, rapid-scanning receiver employing short baseline interferometry for precision direction finding (DF). LOCO GPSI system hardware and software have been prototyped and packaged in a flight-qualified pod.

The technology used in this project is seen to have a great dual-use potential for satisfying GPS situational awareness / interference monitoring requirements of the civil and military communities. This concept can be used for surveying the RF environment around airfields and harbors prior to commencing GPS-based operations. The airborne concept can also be adapted to a static implementation around airfields and harbors for a continuous monitoring/ surveillance capability.

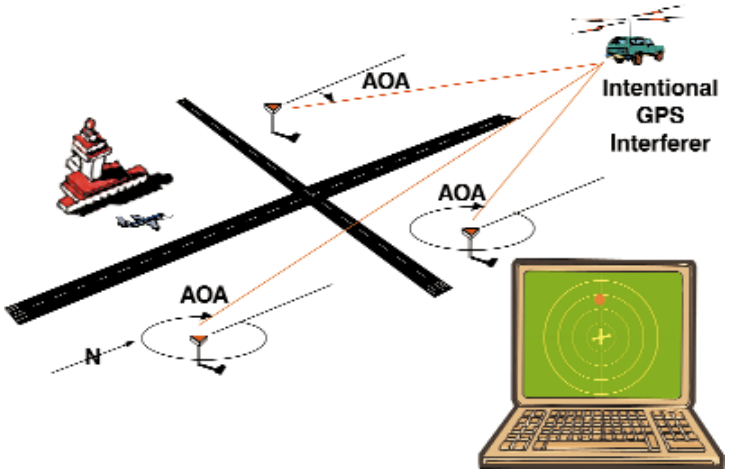
SSC San Diego can support you in adapting this technology to your GPS interference monitoring needs.

- Systems Engineering
- Anechoic Chamber Testing
- Concept of Operations Refinement
- Systems Utility Analyses
- System Integration

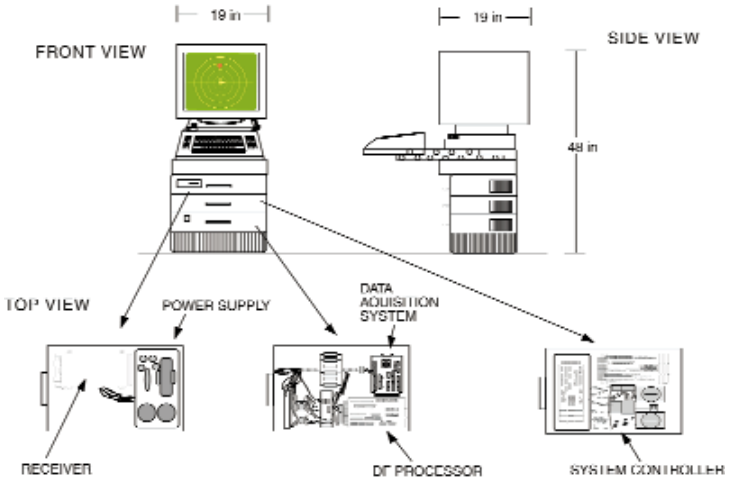
For additional information,

visit our website at:

http://gps31.spawar.navy.mil



Potential Airfield Implementation



Airfield Implementation Hardware

SD 182
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Member of the GPS Joint Program Office (JPO) Test Center of Expertise (COE)